

Title (en)

Lithium ion electrochemical cell with safety valve electrical disconnect

Title (de)

Lithium-Ionen elektrochemische Zelle mit elektrischen Abschaltmitteln enthaltendem Sicherheitsventil

Title (fr)

Pile électrochimique à ions lithium contenant une soupape de sécurité pourvue de moyens de déconnexion électriques

Publication

EP 0818838 A3 20010411 (EN)

Application

EP 97202099 A 19970708

Priority

US 67796196 A 19960710

Abstract (en)

[origin: EP0818838A2] An explosion-proof valve electrical disconnect assembly incorporates a vent valve contact disk which seals the can of a compact electrochemical cell and which faces a juxtaposed stripper contact disk welded at the center by a weld nugget at a weld point, forming a rigid, preferably increased thickness, mass. The underlying stripper contact disk is weakened about the weld point, surrounding the weld nugget to ensure pull-through of the stripper contact disk portion immediately adjacent to the weld connection to effect initial electrical separation of the two contact disks. Subsequent rupture of the vent valve contact disk releases high pressure gas internally from the cell. A semi-rigid assembly cup may support a rigid grommet functioning to sandwich the vent valve contact disk and the stripper contact disk facilitated by crimping of the can top about a deformable L-shaped cross-section annular assembly cup. A current responsive PTC element forms a second circuit breaker independent of the first mechanical circuit breaker formed by the two contact disks. <IMAGE>

IPC 1-7

H01M 2/34; **H01M 2/12**

IPC 8 full level

H01M 2/12 (2006.01); **H01M 2/34** (2006.01); **H01M 50/574** (2021.01)

CPC (source: EP US)

H01M 50/30 (2021.01 - EP US); **H01M 50/3425** (2021.01 - EP US); **H01M 50/574** (2021.01 - EP US); **Y02E 60/10** (2013.01 - EP)

Citation (search report)

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